APPENDIX I

Balls Ferry Research and Education Center (BFREC) Administrative Record

In Chronological Order

Meeting at Dymesich Property

(March 29, 2004)

Draft Proposed Framework for the Balls Ferry Wetlands

(April 30, 2004)

INCLUDES:
Project List for BFW and Freshman Science Course (Anderson New Technology High School)

BFWU/ANTHS Conceptual Plan and MOU

(Draft, February 24, 2005)

(Draft 3, March 21, 2005)

Objectives, Balls Ferry Wetland Education Center

(October 10, 2006)

1 of 2

Meeting at Dymesich property on Friday, 03/19/04
Meeting Notes/Outline
Attendees: Cindy Wallen, Ron Zimmerman, students from ANTHS, Brian and Kelly from the McConnell Foundation, David Walker, Steve Arrison, John Siperek

Topics (first cut: 03/22/04 SJA)

Add timeframe or schedule

Develop grants for repair

Determine vision - what stays and goes

News coverage

GPS/ Property boundary, Infrastructure and plant communities or habitats

Develop GIS map

Inventory of species----animals (fish, reptiles, amphibians, birds, and mammals) and plants

1. Roving Species identification/digital photo record
2. Transects
3. Remote sensusing
4. Remote video
5. Bat identification/by frequency signature

Water quality testing

1. Dissolved oxygen, etc.
2. Demonstrate ability of wetland to filter and improve water quality

Mapping accuracy and resolution needed

Compatibility with DFG protocols

Historical use history of property and surrounding area

1. Land grant

2 of 2

2. Pre Dymesich ownership period
3. Dymesich family ownership period
4. Present surrounding land use
5. Surrounding development history

(Highlighted portions were not meeting topics)

04/30/04

DRAFT

Proposed Framework for the Balls Ferry Wetlands

Executive Summary

This "Proposed Management Framework for Balls Ferry Wetlands (BFW) has been developed as a document to provide an overview of the concepts the Department of Fish and Game (Department) proposes to employ when this acquisition is completed. This document includes
BFW Unit area management strategy, goals, background, public use, outdoor education program, Department sponsered youth activities and resource baseline information. BFW would be designated when acquired as a unit of the Mouth of Cottonwood Creek Wildlife area (MCCWA).

Goals

1) Protect, enhance and develop riparian wetland and upland habitats.

2) Develop "youth" recreational and educational opportunities for fishing, hunting, and natural resource conservation when compatible.

Objectives

1) Develop short-term plan (approximately two years) that includes partnerships with Anderson New Technology High School (ANTHS) and other interested youth oriented groups to: identify baseline conditions; identify long-term wildlife compatible activities; and develop and test an outdoor educational plan.

2) Develop long-term plan (beyond two years) that is based upon the short-term plan and promotes: the development of infrastructure; and expansion youth educational opportunities.

BFW Unit area management strategy

- Maintain existing water (irrigation and winter runoff) regime to protect and maintain wetland habitats and dependent wildlife species
- Most areas will be closed zone/access by permit only. The Department would issue permits for outdoor education programs, local birding groups, youth and disabled hunts, etc.
- Provide a secure, controlled environment for youth outdoor education
- Provide youth hunts only, no general public hunting
- Provide general public fishing access to big pond from April through August only

- Establish blind for disabled access by permit only
- Maintain cattle grazing régime for invasive plant control and increase native plant composition

Background

The Department will designate BFW as a unit of MCCWA (see Appendix I for MCCWA overview). However, management strategy will be different. The emphasis for BFW will be "youth" related with other specific activities. Because this strategy is a departure from "traditional" management of Department wildlife areas, partnerships and collaboration between numerous entities will be required. This departure on BFW will limit general public use while emphasizing and focusing on youth education, special youth hunts, and other appropriate activities.

Public Use

Public use has always been an important feature of all state wildlife areas. The Department requires public use on state wildlife areas to be "wildlife compatible". These activities have included birding, hiking, resource education, and research as well as traditional hunting and fishing programs. It is the intent of the Department to allow compatible uses on BFW that supports the Department's management objectives. Emphasizing and focusing almost exclusively on youth activities will be unique for the Department.

Outdoor Education Center

The current infrastructure of BFW includes several buildings and outbuildings. Some of these structures could be converted into meeting and overnight facilities to accommodate educational programs and organized youth programs. Several organizations may be interested in participating. This list included: Anderson New Technology High School (ANTHS), Ducks Unlimited, and California Waterfowl Association. These groups are education based or have established youth programs and may support and participating in youth programs at BFW. These programs may range from sponsored field trips (lasting a few hours) with local schools to week long "camps" that emphasize outdoor activities and conservation.

The BFW facility will also be available for local schools to participate in "outdoor classroom" activities. Outdoor classroom programs generally take time to develop and will require interest and cooperation between local schools and the Department. An example of potential educational youth projects that benefit DFG (see Appendix II) and ANTHS is a curriculum outline for a Freshman Science Course (see Appendix III).

Local Groups

Because agricultural activities may be an important management component of BFW, opportunities will be present for youth oriented agriculture programs. Facilities such as

barns and irrigated fields may allow 4H and FFA groups to use portions of the facility for their projects. The University of California Cooperative Extension staff might express interest in using these facilities for both 4H projects and an experimental agricultural site.

Department Sponsored Youth Activities

The Department sponsors several youth hunting activities such as the youth dove hunts, youth pheasant hunt and youth waterfowl hunt(s) The land and infrastructure at BFW is suited for youth sponsored hunting and fishing activities. The Shasta Sportsman Club may be interested in participating as a partner.

The Department intends to feature youth only waterfowl hunting on BFW. Waterfowl hunting is typically allowed on Wednesdays, Saturdays and Sundays on state wildlife areas. While the details have not yet been developed, BFW will offer youth only hunting opportunities on a frequent basis. BFW would be the only public hunting area in the State that will emphasize youth hunting opportunities in this manner. However, this activity might be limited because of the limited area available.

Other Public Use

Because of the emphasis on youth activities and availability of general public opportunities on MCCWA, general public access may not be available BFW. For example, waterfowl hunting which is not limited to "youth only" is currently available at other units of the MCCWA. This will help satisfy site security and safety issues.

Livestock Grazing Program

The historic livestock grazing regimen will continue on the eastern and southern portion of the property. Upland grasslands at BFW tend to be dominated by invasive weed species which threaten native plant diversity. For control the Department will continue a cattle grazing regime designed to control invasive plants while increasing native plant composition. The primary grazing area will be the 24 acres of irrigated pasture on the south end of this parcel during the spring and summer irrigation season and on the eastern 100 acre portion for winter grazing. The lessee will do the fence maintenance, manage irrigation and provide rotation of cattle as needed.

Baseline Monitoring

Baseline conditions should be documented to determine if long-term management activities and strategies are beneficial or detrimental for various resources. This should be done as early as possible and prior to any modifications to BFW. An attempt to document all terrestrial wildlife and their habitats should be considered. However, the following items highlight a priority in identifying baseline conditions: habitat and exotic plants; waterfowl; raptor surveys; neotropical migrant songbirds; rare plant survey; and archaeological surveys

Project List for BFW

1. Map infrastructure—buildings, roads, pumps, gates, structures
   - GPS
   - Aerial photos

2. Map and classify habitat types on property
   - GPS, computer download, Arc view
   - Aerial photos
   - Satellite imagery
   - Wildlife Habitat Relationships (WHR)
   - Permanent digital camera photo stations
   - Monitoring protocols for habitat

3. Develop bird list
   - Bird recorders—build and use
   - Protocol
   - Direct observation
   - Listening stations
   - Four season surveys
   - Remote stations w/ video link

4. Develop mammal list
   - Sherman live traps, ID
   - Protocol
   - Scats-microscopes
   - Tracks-trails, track plates
   - Anabat
   - Trailmaster cameras
   - Photo bait stations

5. History of ecological changes
   - Aerial photographs
   - Interviews
   - Historical reports

6. Wildlife forage plots/habitat development
   - Farming techniques-tractors, irrigation, fencing, seeding
   - Test plots
   - Document wildlife use
   - Marsh improvement-disking, burning, cattle use, nest boxes

7. Infrastructure improvements
   - Signs, blinds, trails

APPENDIX III

Freshman Science Course

S1 – The Local Community (Biosphere)

I. **Team Building/Interpersonal Communication**
- A. Guiding Question – Who are we?
- B. Primary Activities
  1. Team building
  2. Interpersonal Communication
  3. Use canned program
  4. Field Trip

II. **Survey and Mapping**
- A. Guiding Question – Where are we? (sense of place)
- B. Primary Activities
  1. Multi-sensory exploration of the study area
  2. Community Survey
  3. Park Survey
  4. Map Building
- C. Primary Products
  1. Baseline habitat maps of Balls Ferry Wetlands Unit
  2. Survey Results
  3. Presentation to stakeholders outside of school
- D. Assessment
  1. Process
     - a) Qualitative Observation
     - b) Quantitative Observation
     - c) Sampling techniques
     - d) Constructing a Data Table
     - e) Constructing a Graph
     - f) Teamwork/Interviewing Skills- use teamwork rubric to assess
     - g) Use of Tools- asses through map
- E. Unit Sequence
  1. DFG requests project.
  2. Multisensory exploration of site using GLOBE learning activities
  3. Orientation to unit and assessment prep (Outcomes, assessment)
  4. Presentation of larger task – discovery of a problem, issue, or unusual situation which will become the focus of our study.
  5. Mind mapping about purpose of mapping/survey/biotic communities.
  6. Fun and creative art project to teach the distinction between species, indicator species, population, habitat, biodiversity, adaptation, and community. (introductory. Remember that they will develop conceptual understanding as they use the terms.)

7. Learn Survey techniques and criteria.
8. Students develop survey tool with partners; DFG, ACID, local community, other schools, see AAW Community Mapping Tools.
9. Students learn interviewing skills
10. Students learn WHR Habitat Mapping Protocol
11. Community and site survey.
12. Survey results (Ron's class)
    a) Data tables and graphs
    b) Students begin considering issue of effective communication
13. Community and Wetland's Map created. Visually represent attitudes/culture surrounding site. (Ron's Class)
14. Assessment
15. Student – teacher – partner reflection

F. Decisions – Tasks – Issues
1. Design assessment tools
2. Create multi-sensory exploration of environment
3. Teacher training on GIS, GPS, and other software
4. Purchase and set-up GIS server
5. Select packaged curriculum materials to provide GIS, mapping, and inventory experiences
    a) Globe
    b) Nature Mapping
    c) EcoNet

III. **Data Collection/Inventories**

A. Guiding Questions
1. What is here?
2. What are the community interests/problems?

B. Primary Activities
1. Identify and define primary communities
2. Do detailed inventory of one community
    a) Plants
    b) Indicator species
    c) Birds
    d) Insects
    e) Mammals
    f) Reptiles/Amphibians
3. Entries in Field Notebook

C. Primary Products
1. Field Notebook
2. Species lists
3. Pictures all observed species
4. Contributions to ongoing database, new layers added to base maps
5. Presentation of results to DFG

D. Assessment
1. Process

a) Qualitative Observation-rubric for field notebook, dissections
b) Quantitative Observation-rubric for field notebook, dissections
c) Classification-quizzes, dissections
d) Sampling-quizzes
e) Measurement-quizzes, field notebook rubric
f) Constructing a Data Table and a Graph-field notebook rubric
g) Acquiring and Processing your own Data-field notebook rubric
h) Effective Communication-collaboration rubric

2. Content
   a) Populations
   b) Biodiversity
   c) Adaptations
   d) Habitat
   e) Species
   f) Indicator species
   g) Community
   h) Comparative anatomy and adaptations of different classes of organisms

E. Unit Sequence
1. Orientation to section and assessment preparation (expected outcomes and assessment tools) (nature illustration, digital camera use, filed collection and inventory techniques, indicator species, observations of biology concepts listed above)
2. Learning experiences related to
   a) Adaptations
   b) Biodiversity
   c) Habitat
   d) Sampling and inventory techniques
   e) Classification
   f) Field data collection skills
   g) Digital camera use
   h) Nature illustrating
3. Select habitat to inventory and gather initial information about that habitat.
4. Learning experiences related to inventory techniques needed
   a) Sampling and inventory techniques (refer to DFG list)
      1. Develop bird inventory
      2. Develop mammal inventory
      3. Develop insect inventory
      4. Develop reptiles and amphibian inventory
      5. Develop plant inventory
   b) Instruction in creating a field notebook.

c) Classification
d) Field data collection skills
e) Digital camera use (Greg)
f) Nature Illustration (Greg)

5. Focused investigation of one WHR habitat as selected on the basis of the original survey to create species inventory.
6. Organize and analyze data.
7. Create Database, including creating layers for GIS map.
8. Prepare presentations for DFG.
9. Present results to DFG.
10. Assessment (integrate process and content outcomes)
11. Reflection (integrate process and content outcomes)

F. Decisions – Tasks – Issues
1. Purchase
a) Field journals
b) Colored pencils
c) Inventory tools
(1) Binoculars
(2) Measuring tapes
(3) Magnifying glasses
d) Macroinvertebrate sampling equipment
e) Insect sampling equipment
2. Identify and get commitment from
a) Parent mentors (will accompany students in park for safety and supervision reasons)
b) Local scientific mentors
c) Local experts
3. Select packaged curriculum materials to provide appropriate educational experiences
a) Globe
4. Create assessment tools
5. Database decisions
a) Structure
b) Filtering data for quality
c) Method for inputting student data
6. Digital cameras

IV. **Research**
A. Guiding Question – What used to be here?
B. Primary Activities
1. Interviews of elders – record stories
2. Historical research
a) Old Maps
b) Journals

c) Records

C. Primary Products
1. Public Display in information gathered including
a) Reproductions of old maps and photos
b) Elder Stories
c) Descriptions of the site in the past

D. Assessment
1. Process
a) Inference
b) Acquiring and Processing Your Own Data
c) Effective Communication

E. Unit Sequence
1. Define purpose of interviews
2. Students help make decisions about
a) Location for display
b) Type of display
c) Grading criteria
3. Brainstorm
a) Elders to interview
b) Tribal connection
(1) Tribal interests
(2) Tribal assets (Indigenous land use management)
4. Establish
a) Interview process
b) Interview scheduling
c) Documenting interviews
5. Complete Interview
6. Process interview results
7. Define purpose and process for studying old data
8. Study old maps and data
9. Report/share results of old data research
10. Archive results
11. Create and setup display
12. Assessment (integrate process and content outcomes)
13. Reflection (integrate process and content outcomes)

F. Decisions – Tasks - Issues
1. Develop assessment
2. Locate old and make accessible to students.
a) Map resources
b) Historic data resources
3. Identify place for display and get permission/scheduled.
4. See if Mark would be interested in collaborating on this section.
5. Local historic society members/experts
a) Identify
b) Explore partnership possibilities
c) Get commitments

6. Locate elders to interview as back up for student process

V. **Problem Identification – Vision Creation**
- A. Guiding Question – How do we want it to be?
- B. Primary Activities
  1. Community Visioning Process
  2. Cycles where need-to-knows are discussed and alternate with focused research to develop an understanding of the problem.
  3. Discuss issues with
     a) Park Managers
     b) Other experts
  4. Mind Mapping of Vision
- C. Primary Products
  1. Representations of the vision
     a) Maps
     b) Pictures
- D. Assessment
  1. Process
     a) Inference
     b) Critical Thinking
     c) Effective Communications
- E. Unit Sequence
  1. Community Visioning Process
     a) Use public display previously created to provide context
     b) Outcome is identification of a project/action
  2. Create image of desired outcome
  3. Reflection (integrate process and content outcomes).
- F. Decisions – Tasks - Issues
  1. ???

VI. **Problem/Solution Identification**
- A. Guiding Question – What is the best way to do it?
- B. Primary Activities
- C. Primary Products
  1. Action Plan
  2. Presentation to Stakeholders
- D. Assessment
  1. Process
     a) Variables and the Relationship Between Them
     b) Predicting
     c) Experimenting
     d) Critical Thinking
     e) Experimenting
- E. Unit Sequence
  1. Assessment preparation
  2. Community Vision-to Action Process
     a) Use public display previously created to provide context
     b) Outcome is identification of project/action

3. Mind Mapping of Vision
4. Create image of desired outcomes and projects to reach them.
5. Develop Plan
6. Assessment (integrate process and content outcomes)
7. Reflection (integrate process and content outcomes)

F. Decisions – Tasks - Issues
1. Decide on student groupings
2. Develop assessment tools

VII. **Action/Restoration**

A. Guiding Question?
B. Primary Activity – Carry out the plan
1. Identify the variables in an experiment.
2. Classify variables as independent (manipulated), dependent (responding), or controlled (constant or randomized during experiment)

C. Primary Products
D. Assessment
E. Unit Sequence
1. Gather resources
2. Take action
3. Develop monitoring/experiment plan
a) Identify the variables in an experiment.
b) Classify variables as independent (manipulate), dependent (responding), or controlled (constant or randomized during experiment)
4. Evaluate success
5. Define next steps

F. Decisions – Tasks - Issues
1.

VIII. **Celebration**

A. Guiding Question?
B. Primary Activity
1. Plan celebration
2. Invite all individuals who contributed to the project
a) Survey respondents
b) DFG and other stakeholders
c) Other Experts
d) Elders
3. Tours to highlight success of project
4. Have fun

C. Primary Product
D. Assessment
1. Effective Communication

E. Unit Sequence
1. Students plan celebration
2. Invite all individuals who contributed to the project

a) Survey respondents
b) DFG ET. al

3. Gather materials
4. Plan tour/presentation of action/restoration for celebrants

5. Assessment (integrate outcomes)
6. Reflection (integrate outcomes)

F. Decisions – Tasks - Issues

IX. **Reflection**

A. Guiding Question
1. What did we accomplish?
2. How did we do?
3. Why?

B. Primary Activities

C. Primary Products

D. Assessment

E. Unit Sequence
1. ???

F. Decisions – Tasks - Issues
1. ???

BFWU/ANTHS CONCEPTUAL PLAN and MOU draft 2-24-05

Mission: Develop an Educational Center that stimulates developing adults to understand and appreciate the natural world by providing illustrated learning opportunities.

Goal: (From minutes of 11/22/04 meeting) Collaboratively develop educational formats for programs at the Wetland Educational Center (WETTECH), and after testing these programs, ANTHS will become the site mentor for Shasta County.

I. ANTHS has primary responsibility for the education components.
- A. Develop an education plan that uses WETTECH as a focal point for ANTHS
- B. Expand use of the area to include other schools in Shasta County
  1. Develop student docents who can lead other groups of students
- C. Develop a multi-grade curriculum
  1. The curriculum must meet state standards
  2. Students will provide a history of the area and the project
- D. Provide opportunities/facilities for staff training and development
- E. Develop a website for public information
  1. Provide background info on DFG and its programs
  2. Provide video access to the site through remote cameras
  3. Provide links to related sites
- F. Develop a PowerPoint presentation which displays the educational opportunities of the partnership.

II. The DFG has primary responsibility for operating the area.
- A. Background information will include a description of the acquisition process.
- B. A management plan will guide the development and operation of the property.
  1. Baseline biological information will be obtained from ANTHS
     1. Student researchers will gather most of the data.
     2. An inventory of plant and animal species will be done.
     3. Habitat mapping will be accomplished using a GIS
     4. Atmospheric conditions will be recorded
     5. Hydrology and water quality will be monitored
     6. Soils will be sampled
     7. Impacts of grazing will be studied
  2. Youth hunting programs will be implemented

III. Some topics will need to be addressed jointly by ANTHS and DFG.

A. Diversified educational opportunities will be provided to the community.
   1. Astronomy classes or viewing opportunities will be offered
   2. Fly fishing classes will be conducted
   3. Bird watching tours will be allowed
   4. Special needs students will be accommodated

B. Needed facilities must be identified.
   1. A safety survey will be conducted
   2. The need for student housing will be assessed
   3. Classroom needs must be assessed
   4. A camping area would add to the outdoor experience
   5. Restrooms will need to be added and enlarged
   6. Potable water will be needed throughout the infrastructure
   7. Inside and outside chairs, tables and other hardware is needed

C. Additional sources of funding, including grants, will be needed.
   1. Hire a grant writer
      a. California Wildlife Foundation
      b. Coordinate with High School District grant writer

D. Develop a Memorandum of Understanding
   1. Define the roles and responsibilities of the cooperators
      a. Personnel needs will be addressed
      b. Maintenance and custodial tasks will be assigned
      c. Rules for operating the area and programs will be adopted

E. Develop a safety plan for the protection of students, and other facility users

F. Site development plans will be adopted
   1. Infrastructure will be surveyed
   2. Needed facilities will be considered for developed
   3. A trail system will be planned to make the area more accessible
   4. Habitat rehabilitation projects will be planned
   3. Facilities will be prepared for use by students and others

G. A steering committee will be assembled to guide the programs.
   1. Members will be selected from a wide range of interests, including ANTHS, District, DFG, local landowners, students and other interested groups.
   2. The committee will act as a "sounding board"
   3. The committee assist were it can with the site development

Draft 3 3-21-05 dw

THE BALLS FERRY WETLAND UNIT: A CONCEPTUAL PLAN FOR THE PARTNERSHIP BETWEEN THE DEPARTMENT OF FISH AND GAME AND ANDERSON NEW TECHNOLOGY HIGH SCHOOL

The mission of the partnership is to develop a Wetland Educational Center (WEC) that stimulates developing adults to understand and appreciate the natural world by providing learning opportunities that reflect life. In a meeting on November 22, 2004, a committee of Department of Fish and Game (DFG) and Anderson New Technology High School (ANTHS) representatives decided that the goal of the partnership would be to collaboratively develop educational formats for programs at the WEC, and after testing these programs ANTHS will become the site mentor for Shasta County.

In the partnership, ANTHS has primary responsibility for the education components. ANTHS will develop an education plan that uses the site as a focal point for their activities. They will develop a multi-grade curriculum which will meet State standards. Students will participate in the gathering of information and will provide reports which contribute to the understanding of the natural resources and history of the area. Once the curriculum is tested, student docents will be trained to lead groups, including students from other schools in Shasta County.

In addition to the academic aspects, the WEC will provide other site-related opportunities. The facility will be used for training and development of staff and faculty. ANTHS students and faculty will develop a website which conveys information to the public. The website will include background information on the DFG and its programs, provide video access to the site through the use of remote cameras, and provide links to other related sites. A PowerPoint presentation will be developed which displays the educational opportunities of the partnership.

The DFG will have primary responsibility for the development and operation of the area. A Management Plan will be drafted which will direct these development and operation activities. Within the plan, background information will include a description of the process which led to the acquisition of the property. A youth hunting program will be implemented. Baseline biological information, used to make informed decisions, will be obtained from ANTHS student researchers. Student research will include an inventory of plant and animal species. Habitats will be mapped using a Geographic Information System. Atmospheric conditions will be monitored. Hydrology and water quality will be assessed. Soils will be sampled and described. The impacts of grazing will be studied. The plan will periodically be reviewed and updated as new information becomes available.

Some issues impact both ANTHS and DFG and will need to be addressed jointly. A Memorandum of Understanding will be written which defines the roles and responsibilities of the partners. Staffing needs will be addressed. Maintenance and custodial tasks will be assigned. Rules for operating the area and the programs will be adopted.

2 of 2

Needed facilities and improvements will be identified. A safety survey of the existing facilities will be conducted. Student housing and classroom needs will be assessed. The locations of restrooms and potable water will be identified and their adequacy will be determined. The need for chairs, tables and other hardware, both inside and outside, will be investigated. The feasibility of an outdoor camping area will be explored.

After identification of the needs, plans will be developed which will address those needs. A safety plan will provide protection for students and other facility users. A site development plan will address identified infrastructure deficiencies. A trail system will be designed which will make the area more accessible. Habitat rehabilitation and development projects will be planned and the facilities will be prepared for use by students and others.

Diversified educational opportunities will be provided to the community. These could include classes such as astronomy and fly fishing. Bird watching tours will be conducted. Accommodations for special needs students will be provided.

In order to meet these identified needs and take advantage of the opportunities, additional funding, including grants, will be required. The services of a grant writer will be obtained to apply for this funding.

A steering committee will be assembled to provide guidance for the programs. Members of the committee will be selected from a wide range of interests, including ANTHS, DFG, the Anderson High School District, local landowners, students and other interested groups.

Michelle Rodebaugh
October 10, 2005

OBJECTIVES

The goal of the Balls Ferry Wetland Education Center (BFWEC) is to provide learning opportunities for the community, especially developing adults, by designing educational projects that teach wetland conservation through "hands-on" experiences.

By the end of the first year, BFWEC will:

- Establish partnership with Anderson New Technology High School and Shasta College.
- Hire an Outdoor Educational Coordinator.
- Purchase:
  - A six-man rowboat and six life jackets.
  - Water quality equipment (oxygen, conductivity, and pH meter).
  - Five binoculars (7 X 35)
  - A GPS unit.
  - Five sets of field guides (mammals, birds, and plants).
- Rent three portable bathrooms.
- Build boardwalks for access to observation points.
- Implement weekly visits by groups of 30-50 students (2 classes).
- Collect baseline biological data using current DFG protocols.
  - Inventory plant and animal species.
  - Map habitat.
  - Monitor water quality.
- Develop and test educational formats that will be used by next year's students.

By the end of the second year, BFWEC will

- Establish five student docents who can lead other groups of students and teach them the wetland monitoring techniques.
- Develop a website for public information.
- Finish analyzing student's first year data and write a report.